

INTERNATIONAL SEARCH REPORT

International Application No
PCT/US2005/004745A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 C23G1/18 C23G1/22 C23F11/167

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 C23G C23F C11D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 752 411 A (MELIN ET AL) 21 June 1988 (1988-06-21) column 3, lines 22,23,25-28 column 4, lines 15,16 examples 1-3 examples 1-15; table I examples 10-14; table II	1-17, 20
A	US 4 578 208 A (GEKE ET AL) 25 March 1986 (1986-03-25) the whole document	1-20
A	US 4 389 259 A (DANNER ET AL) 21 June 1983 (1983-06-21) the whole document	1-20

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

22 April 2005

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10/05/2005

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Information on patent family members

International Application No

PCT/US2005/004745

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4752411	A	21-06-1988	FR 2564853 A1	29-11-1985
			AR 240474 A1	30-04-1990
			AU 581226 B2	16-02-1989
			AU 4301485 A	05-12-1985
			CA 1271681 A1	17-07-1990
			DE 3564699 D1	06-10-1988
			DK 233985 A ,B,	29-11-1985
			EP 0165885 A1	27-12-1985
			FI 852104 A ,B,	29-11-1985
			JP 1781098 C	13-08-1993
			JP 4071439 B	13-11-1992
			JP 60258299 A	20-12-1985
			KR 9206029 B1	27-07-1992
			NO 852085 A ,B,	29-11-1985
			OA 8037 A	31-01-1987
US 4578208	A	25-03-1986	DE 3316724 A1	08-11-1984
			AT 37728 T	15-10-1988
			BR 8402107 A	11-12-1984
			CA 1231294 A1	12-01-1988
			DE 3474463 D1	10-11-1988
			EP 0124851 A2	14-11-1984
			ES 8502484 A1	01-04-1985
			JP 1800708 C	12-11-1993
			JP 5009519 B	05-02-1993
			JP 59211581 A	30-11-1984
			MX 166996 B	19-02-1993
US 4389259	A	21-06-1983	AT 8279 T	15-07-1984
			AU 550543 B2	27-03-1986
			CA 1169239 A1	19-06-1984
			DE 3164546 D1	09-08-1984
			EP 0039314 A1	04-11-1981
			HK 15685 A	15-03-1985
			AU 7002281 A	05-11-1981
			BR 8102629 A	26-01-1982
			JP 1035919 B	27-07-1989
			JP 1552348 C	23-03-1990
			JP 56169780 A	26-12-1981
			ZA 8102886 A	29-12-1982